



UNITED STATES PATENT AND TRADEMARK OFFICE

CDR
UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,591	03/02/2004	Bradley R. Boyer	PTSI 0101 PUS	3448
22045	7590	04/21/2005	EXAMINER	
BROOKS KUSHMAN P.C. 1000 TOWN CENTER TWENTY-SECOND FLOOR SOUTHFIELD, MI 48075			WACHSMAN, HAL D	
		ART UNIT	PAPER NUMBER	
		2857		

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/791,591	BOYER, BRADLEY R.	
	Examiner	Art Unit	
	Hal D. Wachsman	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 02 March 2004.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-23 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) 1-23 is/are allowed.

6) Claim(s) _____ is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 02 March 2004 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3-2-04.

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ .
5) Notice of Informal Patent Application (PTO-152)
6) Other: ____ .

1. This application is in condition for allowance except for the following formal matters:

a) The drawings are objected to because labeling (i.e. in words) is needed of components 20, 22 and 24, in Figure 1 as well as components 26, 30 and 36, in Figure 2. Appropriate correction is required.

b) The Abstract is objected to because it is greater than 150 words in length. Appropriate correction is required.

c) The use of the trademarks Data Highway Plus and ControlNet has been noted in this application (see page 6). It should be *capitalized* wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

d) Claims 9, 11, 22 and 23, are objected to under 37 C.F.R. 1.75(a) for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. Claim 9, line 2, cites "each group of industrial controllers" which it appears should be "each additional group of industrial controllers". Claim 9, lines 3-4, cite "each group computer" which it appears should be "each unique group computer". Claim 11, line 3, cites "each industrial controller application" which appears to lack clear antecedent basis. Claim 22, line 3, cites "its own scan rate" however the use of the pronoun "its" adds ambiguity with respect to what exactly possesses the scan rate. In claim 23, line 2, it appears that the word "on" is missing between the words

"based" and 'the". The examiner asks the applicant to better claim the limitations cited above. While the examiner understands the intentions of the applicant he feels confusion could be drawn from the limitations cited above. Appropriate correction is required.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

2. The following references are cited as being art of general interest: Emmond (5,327,557) which discloses time stamping in a task queue, Colgate et al. (5,594,889) which disclose an event logger and an event queue and Burke (4,972,367) which discloses a programmable controller and a raw data queue.
3. Claims 1-11 are allowable over the prior art because the prior art does not disclose or suggest: a group computer for a plurality of industrial controllers and which is connected to a data communications network operative to: synchronize the time clock in each of the plurality of industrial controllers to the same time at a particular instant of time; for each queue in each industrial controller, store a queue scan rate value and the queue length; and for each queue in each industrial controller, retrieve at least one of the event records held in that queue at a periodic interval based on the scan rate value for that queue.

Claims 12-19 are allowable over the prior art because the prior art does not disclose or suggest: in each industrial controller of a group of industrial controllers, establishing logic to detect a predetermined event and store an indication of the detected event associated with a time stamp as an event record in a queue associated with the predetermined event; in each group computer, establishing a scan rate for each queue in that group, periodically reading the event records in each queue based on the scan rate for that queue, and accumulating the event records for all queues in that group; and collecting the accumulated event records for each group computer in a server.

Claim 20 is allowable over the prior art because the prior art does not disclose or suggest: pushing an event record onto a finite length queue initiated within an industrial controller with reading all event records held by the queue after an interval determined as a scan rate; discarding as a duplicate event record any event record matching a previously read event record; and dynamically determining the scan rate based on whether or not any duplicate event records are discarded.

Claim 21 is allowable over the prior art because the prior art does not disclose or suggest: pushing an event record onto a finite length queue initiated within an industrial controller with pushing an overflow event record onto the queue if an overflow event is detected; reading and clearing all event records held by the queue after an interval determined as a scan rate; and dynamically determining the scan rate based on reading at least one overflow event.

Claims 22 and 23 are allowable over the prior art because the prior art does not disclose or suggest: establishing a plurality of queues, each queue established in an industrial controller, each queue having its own scan rate; associating each of a plurality of events with an event label and one of the plurality of queues; storing the event label associated with the detected event together with a time stamp as an event record in the queue associated with the detected event and reading each queue periodically at a rate determined by the scan rate for that queue.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hal D. Wachsman whose telephone number is 571-272-2225. The examiner can normally be reached on Monday to Friday 7:00 A.M. to 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on 571-272-2216. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>.
Should you have questions on access to the Private PAIR system, contact the
Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Hal D Wachsman
Primary Examiner
Art Unit 2857

HW
April 17, 2005